

WHAT IS CLAIMED IS:

1. A pharmaceutical composition comprising a nerve growth stimulating amount of a non-FKBP12-binding agent that binds to a polypeptide component of a steroid receptor complex other than a steroid hormone binding portion of the complex and a pharmaceutically acceptable excipient.
2. The composition of claim 1 wherein binding of the agent to the polypeptide component causes hsp90 dissociation from the complex or prevents hsp90 association with the complex.
3. The composition of claim 1 wherein the agent is selected from the group consisting of a non-FKBP12-binding FK506 analog, a benzoquinone ansamycin, a peptide comprising a sequence of a selected polypeptide component of the complex at a site of interaction between the selected component and another polypeptide component of the complex, an antibody that binds to a polypeptide component of the complex, and combinations thereof.
4. The composition of claim 3 wherein the benzoquinone ansamycin is geldanamycin or a derivative thereof.
5. The composition of claim 1 wherein the agent binds to hsp90 or FKBP52.
6. The composition of claim 1 wherein the composition further comprises a neurotrophic factor other than the agent.
7. The composition of claim 6 wherein the neurotrophic factor is selected from the group consisting of NGF, IGF-1, aFGF, bFGF, PDGF, BDNF, CNTF, GDNF, NT-3, NT 4/5, and mixtures thereof.
8. The composition of claim 1 wherein the

composition further comprises a steroid hormone that is a ligand of the steroid receptor complex.

9. A pharmaceutical composition comprising
- 5 (i) a nerve growth stimulating amount of an agent that binds to a polypeptide of a steroid receptor complex other than a steroid hormone binding portion of the complex, the agent being selected from the group consisting of a non-FKBP12-binding FK506 analog, a
- 10 benzoquinone ansamycin, a peptide comprising a sequence of a selected polypeptide component of the complex at a site of interaction between the selected component and another polypeptide component of the complex, an antibody, and combinations thereof, wherein the agent
- 15 causes hsp90 dissociation from the complex or prevents hsp90 association with the complex, and
- (ii) a pharmaceutically acceptable excipient.

10. The composition of claim 9 wherein the
- 20 agent is a non-FKBP12-binding analog of FK506 or a benzoquinone ansamycin.

11. The composition of claim 9 wherein the
- 25 component is hsp90 or FKBP52.

12. A pharmaceutical composition comprising a nerve growth stimulating amount of a non-FKBP12-binding FK506 analog that binds to FKBP52 and a pharmaceutically suitable excipient.

13. A pharmaceutical composition comprising a nerve growth stimulating amount of an agent that binds to hsp90 and causes hsp90 dissociation from a steroid receptor complex or prevents hsp90 association with the
- 35 complex and a pharmaceutically suitable excipient.

14. A method of stimulating nerve cell growth in a mammal comprising administering to a mammal the pharmaceutical composition according to claim 1.

15. A method of stimulating nerve cell growth in a mammal comprising administering to a mammal the pharmaceutical composition of claim 9.

5           16. A method of stimulating nerve cell growth in a mammal comprising administering to a mammal the pharmaceutical composition of claim 12.

10           17. A method of stimulating nerve cell growth in a mammal comprising administering to a mammal the pharmaceutical composition of claim 13.

15           18. A method for stimulating growth of a nerve cell comprising contacting the nerve cell with a non-FKBP12-binding agent that binds to a polypeptide component of a steroid receptor complex other than a steroid hormone binding portion of the complex and causes hsp90 dissociation from the complex or blocks association of hsp90 with the complex.

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19. A method of treating a mammal having a transected peripheral nerve or injured spinal cord, the method comprising:

25           administering to the mammal a pharmaceutical composition comprising a nerve growth stimulating amount of a non-FKBP12-binding agent that binds to a polypeptide component of a steroid receptor complex other than a steroid hormone binding portion of the complex and a pharmaceutically acceptable excipient; and

30           grafting to the peripheral nerve or spinal cord an allograft or an artificial nerve graft.

20. The method of claim 19 wherein grafting the allograft or artificial nerve graft to the peripheral nerve or spinal cord of the mammal produces a gap between transected ends of the peripheral nerve or spinal cord, wherein the non-FKBP12-binding agent is administered by filling the gap with a gap-filling composition comprising the non-FKBP12-binding agent.

21. A method of identifying a compound that stimulates nerve cell growth comprising:

- assaying a plurality of test compounds for binding to a polypeptide component of a steroid receptor
- 5 complex other than a steroid hormone binding portion of the complex, thereby identifying binding compounds;
- assaying the binding compounds for stimulation of nerve cell growth.

- 10 22. The method of claim 19 further comprising assaying the binding compounds for dissociation of hsp90 from the complex or blocking association of hsp90 with the complex.